

file

ECOLOGY AND ENVIRONMENT, INC.,

REGION VI

MEMORANDUM

TO: Keith Bradley, Region VI RPO

FROM: Robin Seguin, FIT Environmental Scientist

THRU: K.H. Malone, Jr., RPM *jpt*
For

DATE: November 4, 1985

SUBJ: Sampling Inspection at Vickers Total Petroleum Inc., Ardmore OK. (OK1589)
TDD# R06-8501-23

On May 22, 1985, the FIT (Team Leader Robin Seguin and team members Bernard Cousin, Bill Park and Les Cole) took ten (10) low soil/sediment samples and one (1) residential well sample at the Vickers Total Petroleum Inc. site, Ardmore Oklahoma. Attached are Sample Analysis Summaries, a sketch depicting sample station locations, and photographs of the site.

Results of the sample analysis are detailed on the attached analysis summary sheets. Organic results are summarized by subgroup in Table 1. Hazardous substance list (HSL) polynuclear aromatic hydrocarbons (PNA) were detected in samples from Stations 01, 02, 04 and 05. Non-HSL PNA's were detected at Station 01 thru 05. The highest concentration of the PNA's was in Station 02. Aliphatic hydrocarbons (alkanes) and unknowns were detected in samples from Stations 01 thru 10, the highest concentrations being detected in Stations 06 and 03. Samples from Stations 01 thru 07, 09 and 10 each contained a broad unresolved peak in the BNA chromatogram that is characteristic of oily material. DDT was detected in Station 01, while sulfur was reported in Stations 03, 04, 05, 06, 09 and 10. Sulfur appears to be present in Stations 02 and 07, based on an examination of the chromatograms.

The chromium and zinc concentrations appeared to be slightly elevated in the sample from Station 02. Metals concentrations in the remaining samples were relatively consistent and probably approximated local background levels.

PNA's were detected only in samples nearer the process area, (02, 03, 04, 05), and in the background sample (01). The source of the contamination in the background sample is unknown. Station 06 shows that there is a very significant migration of contaminants from the two lagoons south of the station. Contaminant migration from the landfill and the landfarm is occurring, as shown by contaminants found in Stations 07 and 08, however the level is much less than from the lagoons. Offsite migration is occurring as evidenced by contaminants found in Stations 09 and 10, however no PNA's, the most hazardous materials present, were detected.

9527361



Surface runoff patterns do not account for the contamination in Station 01 and further investigations are needed to determine the source of contamination in this sample. Remedial actions to halt the flow of oily material from the lagoons north of the process area are recommended.

TABLE 1

STATION	HSL PNA	NON HSL PNA	VOA's	ALKANES	UNKNOWNs	OTHER (ALKANE, KETONE, ALDEHYDE)	SULFUR	DDT
01*	689 (7)	10.1 (2)?		3190 (4)	1547.6 (4)?	3410 (4)		200
02**	2430(7)	16,962 (16)	>107.1(8)	1740 (8)	370 (2)		P	
03*		930 (1)		10,500(15)	1890 (3)		920	
04**	230 (2)	180 (1)		350 (1)	440 (2)		42,000	
05*	270 (2)	650 (3)	15 (1)	410 (2)	>330 (2)		1800	
06*			12.9 (2)	>21,380 (22)	>940 (3)		1800	
07*			3 (1)	P (1)	970 (2)		P	
08			35 (3)	360 (2)	2570 (2)		.	
09*				1120 (2)	430 (1)		170	
10*				480 (2)	850 (3)		860	
11								
12			P (1)					

689 (7) - Total concentration in ppb (number of compounds detected).

P - Present.

* - Sample BNA fraction chromatogram contains a broad unresolved peak characteristic of oily material. The maximum intensity of this peak is at approximately scan 2300.

** - In addition to the above noted peak, a second major chromatographic peak was present in the sample, reaching a maximum intensity at approximately scan 1750.

This peak may be due to high concentrations of sulfur in the sample.

? - Quantification questionable.

INORGANIC SOIL ANALYSIS SUMMARY

Page 1 of 2

AS NUMBER: 4385

ITE NAME/CODE: Total Petroleum/ OK 1589

CONCENTRATIONS (ppm)

EPA Sample Numbers

PARAMETER	AMBIENT BACKGROUND											
	MFA186	MFA187	MFA188	MFA189	MFA190	MFA191	MFA192	MFA193	MFA194	MFA195	Western U.S. 2.	Eastern U.S. 2.
matrix type	soil	soil	soil	soil	soil	soil	soil	soil	soil	soil	Soil	Soil
Luminum	6390	7760	8600	5210	13100	12100	12500	16800	18400	6150	58,000	33,000
ntimony	R	R	R	R	R	R	R	R	R	R	.47	.52
rsenic		4.3	3.5					7	11		5.5	4.8
arium	118	45	95	73	138	143	82	185	167	122	580	290
erytium	.58	0.35	.83	0.44	0.9	1.1	1	1.3	1.4	0.89	0.68	0.55
adium											1	1
alcium	12400*	59000*	14000*	54900*	25800*	15600 *	4400*	4970*	8590*	6070*		
chromium	17	136	19	28	25	27	26	24	31	26	41	33
obalt	8.9		11	8.4	13	15	16	11	18	14	7.1	5.9
pper	18	20	17	19	24	22	23	14	20	15	21	13
ron	12100	11500	20300	21400	22700	26000	23100	20000	24500	24000	21,000	14,000
ead	54	17	16	27	46	50	18	12	41	20	17	14
agnesium	4920	2520	3380	3830	4780	4040	3470	2850	3330	1320		
anganese	229	164	269	331	383	423	390	281	605	929	380	260
mercury		0.35									0.046	0.081
nickel	21	14	24	13	34	30	32	22	30	21	15	11
otassium	1330	1790	2870	1160	3170	3780	2690	2630	4730	1380		
elenium	R	R	R	R	R	R	R	R	R	R	.23	.30
ilver											-	-
odium	2290	2390	1910	2120	2290	3050	2990	2850	3530	2410		
atiuum											9.1	7.7
in											.90	.96
anadium	33	29	27	26	61	34	28	34	43	32	70	43
nc	81	234	48	110	75	76	73	54	79	49	55	40
yanide												
ation No.	01	02	03	04	05	06	07	08	09	10		
Sample location	OFFSITE, UPSTREAM OF DRAIN- AGE PATH	IN DRAIN- AGE FROM PONDS & IMPOUND- MENT(SI)	UPSTREAM DRAINAGE BEFORE SURFACE DRAINAGE PATH OF TANKS	UPSTREAM DRAINAGE BEFORE SI IN DRAINAGE PATH OF TANKS	DOWN- STREAM DRAINAGE FROM OIL WASTE PIT	DOWN- STREAM DRAINAGE FROM SI BEFORE LANDFILL DRAINAGE	DOWN- STREAM DRAINAGE FROM LANDFILL	DOWN- STREAM DRAINAGE FROM LANDFARM	SAMPLE OF UP- STREAM DRAINAGE	OFFSITE DRAINAGE	1. Values obtained from "Element Concentrations in Soils and Other Surface Materials of the Contiguous United States", dated 1984. U.S.G.S. Professional Paper 1270	

indicates a value estimated or not reported due to the presence of interference.

spike sample recovery is not within control limits.

duplicate analysis is not within control limits.

2. Reference for East/West Division is the 96 W longitudinal line which bisects Region VI

INORGANIC WATER ANALYSIS SUMMARY

Page ____ of ____

CASE NUMBER: 4385

SITE NAME/CODE: Total Petroleum/ OK 1589

CONCENTRATIONS (ppb)

PARAMETER	EPA Sample Numbers										Drinking Water Criteria	
	MFA197	MFA196									Primary	Secondary
matrix type	water	water										
luminum	38											
ntimony												
rsenic											50	
urium		160									1000	
ryrium												
ndium											10	
alcium		56200										
romium											50	
balt												
pper		110										1000
on	65	15600										300
ad		51									50	
ngesium		25600										
anganese		107										50
rcury											2	
ckel		5.5										
tassium		3030										
Tenium											10	
lver											50	
dium	1260	237000										
allium												
n												
nadium												
nc	9.2	739										5000
anide												
ation No.	11	12										
sample	EPPERSON	FIELD										
cation	WELL	RINSATE										
cation	4375:	BLANK										
	TRUCK											
	BYPASS											

Indicates a value estimated or not reported due to the presence of interference.

spike sample recovery is not within control limits.

duplicate analysis is not within control limits.

TABLE II. ORGANIC ANALYSIS SUMMARY

Page 1 of 5

CASE NUMBER: 4385

SITE NAME/CODE: Total Petroleum/OK1589

1. Priority Pollutant.
 2. Specified Hazardous Substance.
 3. Tentatively Identified.

B - The analyte is found in the lab blank.

J - Indicates an estimated value for tentatively identified compounds or for compounds found below detection limit.

P - Present in sample, but not reported by lab.

TABLE II. ORGANIC ANALYSIS SUMMARY

Page 2 of 5

CASE NUMBER: _____

SITE NAME/CODE: _____

CONCENTRATIONS (ppb)

EPA SAMPLE NUMBERS

PARAMETERS			FB462	FB471	FB470	FB469	FB468	FB467	FB466	FB465	FB464
Compound	Fraction	Class									
Hexane	362	VOA	3	PB	8JB	6JB	5JB	8JB	6JB	7JB	12JB
Alkane	397	VOA	3		10J						
Alkane	444	VOA	3		30J				8J		
C-3 benzene	668	VOA	3		22J						
C-3 benzene	688	VOA	3		20J						
Unknown	529	VOA	3		P						25J
Unknown	643	VOA	3		P						5J
Unknown	63	VOA	3					15J			
Unknown	88	VOA	3							3J	
Unknown	578	VOA	3								5J
Unknown	1967	ABN	3	550JB							
Alkane	2169	ABN	3	400J		610J					
Alkane	2283	ABN	3	1600J		1200J			P		190J
Aldehyde	2372	ABN	3	600J							
Ketone	2404	ABN	3	1000J							
Alkane	2411	ABN	3	660J		520J		120J			170J
Alkene	2420	ABN	3	1300J							
Unknown	2463	ABN	3	740J							
Aldehyde	2542	ABN	3	510J							
Alkane	2595	ABN	3	530J		320J		290J	P		
Unknown	2660	ABN	3	800J							
Unknown	327	ABN	3	3.8J ?							
Unknown	383			8.3JB ?	480JB	450JB	540JB	610JB	PB	620JB	740JB
Unknown	1638			3.8J ?							
Unknown PNA	1919			6.1J ?					150J		
Unknown PNA	2127			4.0J ?	1600J						
Matrix Type			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Station Number			01	02	03	04	05	06	07	08	09
Sample Station Location											

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3. Tentatively Identified.

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? - Quantification questionable

TABLE II. ORGANIC ANALYSIS SUMMARY

Page 3 of 5

CASE NUMBER: _____

SITE NAME/CODE: _____

CONCENTRATIONS (ppb)
EPA SAMPLE NUMBERS

PARAMETERS			FB462	FB471	FB470	FB469	FB468	FB467	FB466	FB465	FB464
Compound	Fraction	Class	FB462	FB471	FB470	FB469	FB468	FB467	FB466	FB465	FB464
Dimethyl phenanthrene	1740	ABN	3	780J							
Dimethyl phenanthrene	1755	ABN	3	1800J							
Dimethyl phenanthrene	1760	ABN	3	1900J							
Unknown PNA	1842	ABN	3	1100J							
Methyl pyrene	1904	ABN	3	1100J							
Unknown PNA	1927	ABN	3	1200J							
Tetra methyl phenanthrene	1948	ABN	3	1000J							
Terphenyl	1987	ABN	3	1500J							
Terphenyl	1999	ABN	3	980J							
Terphenyl	2026	ABN	3	1400J							
Alkane	2147	ABN	3	760J				2600J			
Methyl naphthalene	1092	ABN	3	350J							
Dimethyl naphthalen	1207	ABN	3	430J							
Alkane	1467	ABN	3	210J	530J	350J		920J	P		
Methyl phenanthrene	1664	ABN	3	92J							
Alkane	1707	ABN	3	540J	710J			1400J			
Unknown	2491	ABN	3	120J			330J				
Unknown	2583	ABN	3	250J	230J		P	P			
Unknown PNA	1922	ABN	3	1500J							
Alkane	1629	ABN	3	230J	570J			910J			
Methyl phenanthrene	1648	ABN	3	230J							
Alkane	1556	ABN	3		1800J			950J			
Sulfur	1738 1765	ABN	3		920J	42,000J	1800J	1800J	P		170J
Alkane	1782	ABN	3		710J			1300J			
Alkane	1922	ABN	3		670J			940J			
Alkane	1989	ABN	3		510J			880J			
Matrix Type			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Station Number			01	02	03	04	05	06	07	08	09
Sample Station Location											

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TABLE II. ORGANIC ANALYSIS SUMMARY

Page 4 of 5

CASE NUMBER: _____

SITE NAME/CODE: _____

CONCENTRATIONS (ppb)
EPA SAMPLE NUMBERS

PARAMETERS			FB462	FB471	FB470	FB469	FB468	FB467	FB466	FB465	FB464
Compound	Fraction	Class									
alkane	2114	ABN	3		1000J			1800J			
alkane	2231	ABN	3		670J			P			
unknown	2256	ABN	3		560J			P			
unknown	2263	ABN	3		1100J			P			
alkane	2298	ABN	3		550J			P			
unknown PNA	2494	ABN	3		930J	180J					
alkane	2719	ABN	3		130J						
unknown	2580	APN	3			300J			750J	2400J	430J
unknown	2594	ABN	3			140J					
unknown	1966	ABN	3				360JB			160JB	670JB
unknown PNA	2362	ABN	3				130J				
unknown and unknown PNA	2374	ABN	3				370J				
alkane	1176	ABN	3					1300J			
alkane	1276	ABN	3					860J			
alkane	1806	ABN	3					1100J			
alkane	1854	ABN	3					1400J			
alkane	1879	ABN	3					1400J			
alkane	1897	ABN	3					860J			
alkane	1935	ABN	3					820J			
alkane	2134	ABN	3					1100J			
unknown	2165	ABN	3					940J			
alkane	2174	ABN	3					840J			
unknown	580	ABN	3						220J	170J	
Matrix Type			SOIL								
Sample Station Number			01	02	03	04	05	06	07	08	09
Sample Station Location											

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TABLE II. ORGANIC ANALYSIS SUMMARY

Page 5 of 5

CASE NUMBER: 4385

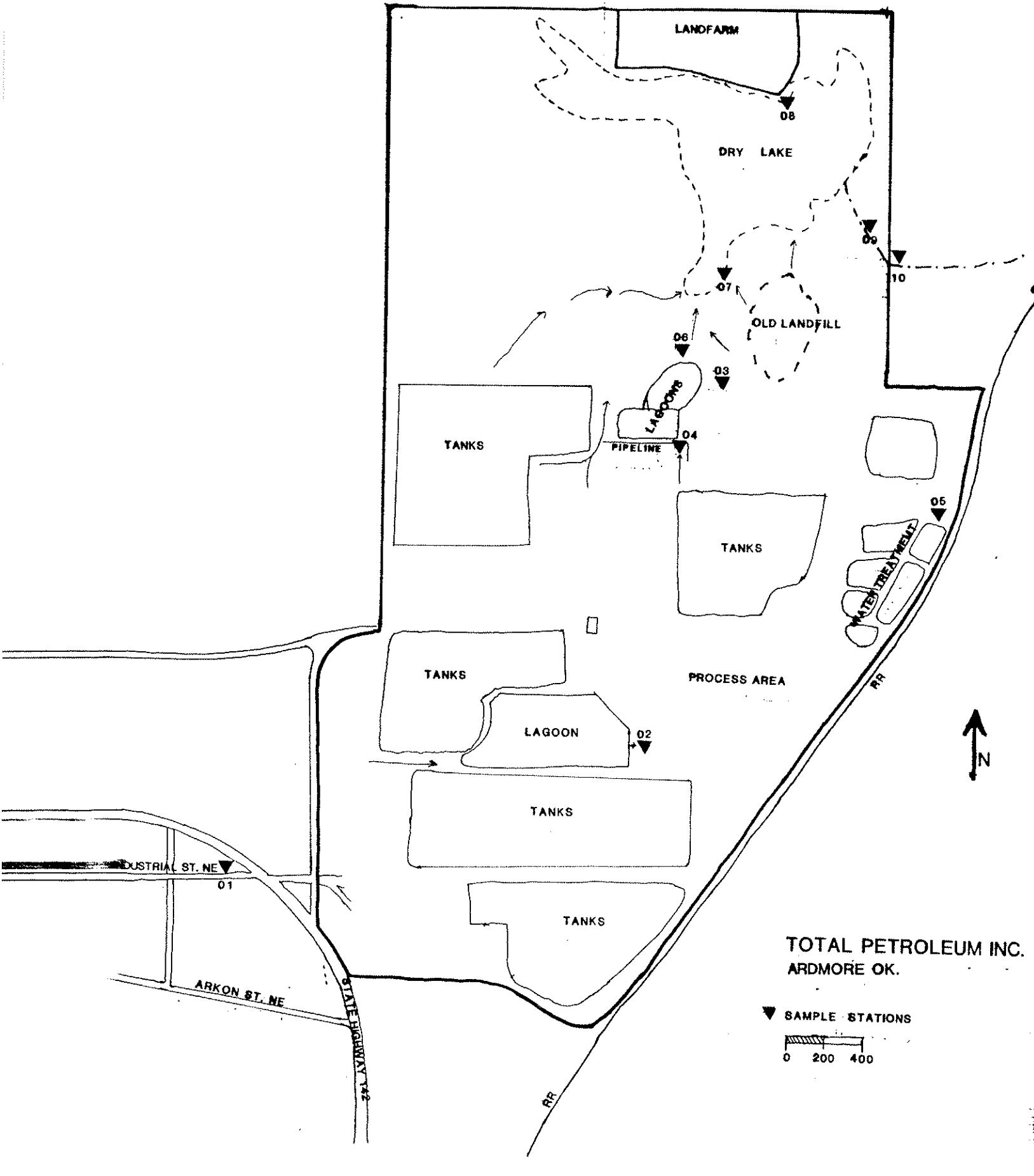
SITE NAME/CODE: Total Petroleum/OK 1589

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Total Petroleum Sample Locations

May 22, 1985

Sample Location

- (1) Offsite, upstream of drainage path.
- (2) In drainage from pond and tanks.
- (3) Upstream drainage before surface impoundments.
- (4) Upstream drainage before surface impoundments in drainage path of tanks.
- (5) Downstream drainage from oil waste pits, now converted to a waste water treatment plant.
- (6) Downstream drainage from surface impoundment before landfill drainage.
- (7) Downstream drainage from landfill.
- (8) Downstream drainage from landfarm.
- (9) Resampling of upstream drainage before it leaves site.
- (10) Drainage offsite, to determine if contaminants are leaving the site.
- (11) Epperson Well
- (12) Rinsate Blank



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Date

5/22/93

363

0732-3848-20 AL 2003

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Company *ECOLOGY & ENVIRONMENT INC* Department/Floor No

Street Address *1509 MAIN ST STE #14*

City *DALLAS* State *TX*

Value To Invoicing ZIP *Zip Code Required For Correct Invoicing

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<input type="checkbox"/> Overnight Box A	<input type="checkbox"/> 12" x 12" x 12"
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5 <input type="checkbox"/> Delivery not later than second business day	
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2 <i>1 M</i>	<i>1 M</i>

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Street Address *1 M*

City *MONTGOMERY TX* State *TX*

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City	
ZIP *Zip Code Required For Correct Invoicing	
AIRBILL NO. 429437142	

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Company 20000-1334	Department/Floor No
Exact Street Address (Use of P.O. Boxes or P.O. "Zip Codes Will Delay Delivery And Result In Extra Charge)	City
ZIP Street Address Zip Required/No P.O. Box *Zip Code 76126	

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4 SERVICES <input checked="" type="checkbox"/> CHECK ONLY ONE BOX	
DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED	
PRIORITY 1 OVERTIME LETTER	PACKAGES WEIGHT YOUR DECLARED VALUE (See right) OVER SIZE
1 Overnight Delivery (Our Packaging) <input type="checkbox"/> 6 8" x 12" x 15" <input type="checkbox"/>	1 100
OVERNIGHT DELIVERY USING OUR PACKAGING	
2 Counter-Pak Overnight Envelope <input type="checkbox"/> 12" x 15"	1 100
3 Overnight Box <input type="checkbox"/> 12" x 12" x 15" <input type="checkbox"/> 12" x 12" x 15" <input type="checkbox"/> 12" x 12" x 15" <input type="checkbox"/>	1 100
4 Overnight Tube <input type="checkbox"/> 36" x 6" x 6" <input type="checkbox"/> 8" <input type="checkbox"/>	1 100
STANDARD AIR <input type="checkbox"/>	
5 Delivery not later than second business day <input type="checkbox"/>	1 100
SERVICE COMMITMENT	
PRIORITY 1 - Delivery is scheduled early next business morning at locations. It may take two or more business days to or from Alaska or Hawaii, or if the destination is outside our primary service areas.	
STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days to or from Alaska or Hawaii, or if the destination is outside our primary service areas.	
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2 DELIVER WEEKDAY <input type="checkbox"/>	
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5 SIGNATURE SECURITY SERVICE (SSS) (Extra charge applies) <input type="checkbox"/>	
6 DRY ICE _____ lbs <input type="checkbox"/>	
7 OTHER SPECIAL SERVICE <input type="checkbox"/>	
8 <input type="checkbox"/>	
9 SATURDAY PICK-UP OR SATURDAY DROP-OFF (Extra charge applies) <input type="checkbox"/>	
Received At Shipper's Door <input type="checkbox"/> Regular Stop <input type="checkbox"/> On-Call Stop <input type="checkbox"/> FedEx Loc <input type="checkbox"/>	
Federal Express Corp. Employee No. Date/Time For Federal Express Use <i>[Signature]</i>	

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YOUR DECLARED VALUE	
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CONSEQUENTIAL DAMAGES	
There is always a risk of late delivery or non-delivery. In the event of a late delivery Federal Express will, at your request, refund all transportation charges paid. See back of Shippers Copy of this airbill for further information.	
CONSEQUENTIAL DAMAGES	
We will not be responsible or liable for any loss or damage resulting from delay, non-delivery or damage to a package except as noted above. This includes loss of sales, income, interest, legal expenses, attorneys fees and other costs, but is not limited to these items. Such damages are called "consequential damages".	
PART #2041738901 FEC-S-751-1000 REVISION DATE 10/84 PRINTED U.S.A. SRC	

SHIPPER'S COPY

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME		DRAINS OF CLOUDY RIVER		Bands, Texas 78270							
OK1589		Total Petroleum											
SAMPLERS: (Signature)				But Park		W.W. Shultz							
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	METALS CYANIDE					REMARKS	
01	5/20/85	0130 0145		X	offsets, upstream of drainage path	1	X X					603055	MFA 186
02	5/20/85	0925 0935		X	on drainage from pond and tanks	1	X X					603060	MFA 187
03	5/20/85	0930 1000		X	upstream drainage before surface impoundment	1	X X					603065	MFA 188
04	5/20/85	0940 0950		X	upstream drainage before surface impoundment path (separate), 1	1	X X					603070	MFA 189
05	5/20/85	1110 1115		X	downstream drainage from oil waste pits	1	X X					603075	MFA 190
06	5/20/85	1035 1105		X	downstream drainage from surface impoundment (separate), 1	1	X X					603080	MFA 191
07	5/20/85	1035 1045		X	downstream drainage from landfill	1	X X					603089	MFA 192
08	5/20/85	1215 1235		X	Receptor drainage, 23 downstream drainage from landfill	1	X X					603094	MFA 193
09	5/20/85	1130 1200		X	Example of upstream drainage	1	X X					603099	MFA 194
10	5/20/85	1145 1215		X	offsets drainage	1	X X					603104	MFA 195
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)			
<i>W.W. Shultz</i>		5/20/85 10:00		<i>Federal Express</i>									
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)			
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks					
<i>Soils A, B, 11</i> <i>4/29/87 120</i>													

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

6-5618

CHAIN OF CUSTODY RECORD

REGION 6
First International Bldg., 1201 Elm St.
Dallas, Texas 75270

PROJ. NO. OK1589	PROJECT NAME <i>Total Petroleum</i>		NO. OF CONTAINERS	<i>METALS CYANIDE</i>						REMARKS			
SAMPLERS: (Signature) <i>Bill Park</i>													
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION								
11	5/6/85	081415	X		Epperson Well 4375 Truck Stop		1	X				603119	MFA196 472 RS
11	"	"	X		"		1	X				603120	" "
12	5/6/85	081420	X		Field Reservoir Blane		PO1	X				603007	MFA196 472 RS
11	"	"	X		"		PO1	X				603008	" "
Relinquished by: (Signature) <i>Bill Park</i>			Date / Time 5/6/85 081415	Received by: (Signature) <i>Federal Express</i>		Relinquished by: (Signature)			Date / Time	Received by: (Signature)			
Relinquished by: (Signature)			Date / Time	Received by: (Signature)		Relinquished by: (Signature)			Date / Time	Received by: (Signature)			
Relinquished by: (Signature)			Date / Time	Received for Laboratory by: (Signature)		Date / Time			Remarks Air Bal H2O ING 429437120				

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME <i>Total Petroleum</i>					NO. OF CONTAINERS						REMARKS <i>PS RS</i>		
SAMPLERS: (Signature) <i>John S. Bell</i>	<i>John S. Bell</i>						<i>EXT</i>	<i>OUR</i>	<i>PS</i>	<i>RS</i>				
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION									
11	5/23/85		X		EPPERSON WELL 437 Truck Bypass	188	X					603105, 603107, 603109, 603111, 603106, 603108, 603110, 603112	<i>FAB 472</i>	<i>GA</i>
11	"		X		"	6	X					603113, 603115, 603117, 603114, 603116, 603118	"	<i>GC</i>
12	5/23/85	1330	Y		Field Rinsate Blank	4	X					603001, 603002, 603003, 603006	<i>FAB 473</i>	
11	"		X		"	2	X					603003, 603004	"	
Relinquished by: (Signature) <i>John S. Bell</i>		Date / Time <i>5/23/85</i>	Received by: (Signature) <i>Federal</i>			Relinquished by: (Signature)			Date / Time	Received by: (Signature)				
Relinquished by: (Signature)		Date / Time	Received by: (Signature)			Relinquished by: (Signature)			Date / Time	Received by: (Signature)				
Relinquished by: (Signature)		Date / Time	Received for Laboratory by: (Signature)			Date / Time		Remarks	<i>John Bell</i> <i>H2O org 42947142</i>					

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME					NO. OF CON- TAINERS	REMARKS						
OK1589	Total Petroleum						EXT VOR						
SAMPLERS: (Signature)	Billie Van Mike Stale												
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
08	5/20/83	1215		X	Downstream drainage from landfill		2	X				603090, 603091	FB465
"	"	"		✓	"		2	X				603092, 603093	"
09	5/20/83	1150		X	Resamples of upstream drainage		2	X				603095, 603096	FB464
11	"	"		X	"		2	X				603097, 603098	"
10	"	1210		X	offset drainage in rear of building		2	X				603100, 603101	FB463
"	"	"		X	"		2	X				603102, 603103	"
Relinquished by: (Signature)			Date / Time		Received by: (Signature)		Relinquished by: (Signature)			Date / Time		Received by: (Signature)	
Billie Van Mike Stale			5/20/83 01300		Federal Express								
Relinquished by: (Signature)			Date / Time		Received by: (Signature)		Relinquished by: (Signature)			Date / Time		Received by: (Signature)	
Relinquished by: (Signature)			Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks	A.1 Bill 429437142 Org soc			

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME					NO. OF CONTAINERS	REMARKS						
OK 1589	Total Petroleum												
SAMPLERS: (Signature)	Bill Park W.W. Schul												
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	X	X	X	X	X	X	X	
01	5/25	0935		X	offic. upstree of driveway path	2	X						603051, 603052 FB 460
"	"	"		X	"	2	X						603053, 603054 "
02	"	0935		X	On driveway from pool and tanks	2	X						603056, 603057 FB 471
"	"	"		X	"	2	X						603058, 603059 "
03	"	0950		X	upstream drainage before surface impoundments	2	X						603061, 603062 FB 470
"	"	"		X	"	2	X						603063, 603064 "
04	"	0910		X	upstream drainage before surface impoundments just upstream	2	X						603066, 603067 FB 469
"	"	"		X	"	2	X						603068, 603069, "
05	"	1010		X	Downstream drainage from oil waste pits	2	X						603071, 603072 FB 468
"	"	"		X	"	2	X						603073, 603074 "
06	"	1055		X	downstream drainage from surface impoundments before landfill	2	X						603076, 603077 FB 467
"	"	"		X	"	2	X						603078, 603079 "
07	"	1035		X	downstream drainage from landfill	RSO 4	X						603081, 603082 603083 603084 FB 466
"	"	"		X	"	RSO 16	X						603085, 603086 603087 603088 "
													603089, 603090
Relinquished by: (Signature)		Date / Time	Received by: (Signature)			Relinquished by: (Signature)		Date / Time	Received by: (Signature)				
Bill Park W.W. Schul		5/25/85 0930	Federal Expr. 155										
Relinquished by: (Signature)		Date / Time	Received by: (Signature)			Relinquished by: (Signature)		Date / Time	Received by: (Signature)				
Relinquished by: (Signature)		Date / Time	Received for Laboratory by: (Signature)			Date / Time	Remarks						
A, B, 11 42 984 37142													

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files



REGION VI
1201 ELM STREET
DALLAS, TEXAS 75220

5/22/85

(Date)

RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Robin Snyder

Ecology of Environment

Robin Snyder

(Signature)

SAMPLES COLLECTED:

SAMPLE NUMBER	TIME	PLACE COLLECTED	TYPE	VOLUME	SPLIT SAMPLE REQUESTED	SPLIT SAMPLE PROVIDED
01	0150	offset, upstream	soil	32oz	no	no
	0155	off drainage path	soil	32oz	no	no
02	0925	on drainage from	soil	32oz	no	no
	0935	pond & tanks	soil	32oz	no	no
03	0950	upstream drainage	soil	32oz	no	no
	1000	before surface impoundment	soil	32oz	no	no
04	0940	upstream drainage	soil	32oz	no	no
	0950	before surface impoundment	soil	32oz	no	no
		in drainage path	soil	32oz	no	no
05	1110	Downstream drainage	soil	32oz	no	no
	1115	from oil waste	soil	32oz	no	no
06	1055	Downstream drainage	soil	32oz	no	no
	1105	from surface impoundment	soil	32oz	no	no
07	1035	Downstream drainage	soil	48oz	56oz	no
	1045	before landfill	soil	48oz	56oz	no
08	1245	Downstream drainage	soil	32oz	no	no
	1320	from landfill	soil	32oz	no	no
09	1150	sample of	soil	32oz	no	no
	1200	upstream drainage	soil	32oz	no	no
10	1000	offset drainage	soil	32oz	no	no
	1010		soil	32oz	no	no

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

Pat Bentley, Env Eng

Total Petroleum Ardmore, OKL

Patricia Bentley
(Signature)

5/22/85

(Date)

DISTRIBUTION:

One copy facility representative
One copy for inspector's records
Original to Regional Office



REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

5/20/85

(Date)

RECEIPT FOR SAMPLES

NAME AND TITLE OF EPA REPRESENTATIVE:

Robin Snyder
EDE

Robi Singh

(Signature)

SAMPLES COLLECTED:

ACKNOWLEDGEMENT OF FACILITY REPRESENTATIVE

The undersigned acknowledges that the samples described above have been collected.

NAME, TITLE AND ADDRESS OF FACILITY REPRESENTATIVE:

M. Espresso

437 "Stuck By Pass (142)

J.C. Epperson
(Signature)

(Signature)

5/22/85

(Date)

DISTRIBUTION:

One copy facility representative
One copy for inspector's records
Original to Regional Office



Photographer / Witness

Les Cole / Bill Park

Date / Time / Direction

5/20/85 1320 South

Comments:

Photo of sample
location 10.



Photographer / Witness

Les Cole / Bill Park

Date / Time / Direction

5/22/85 1215 South

Comments:

Photo of Sample

Location 08



Photographer / Witness

Les Cole / Bill Park

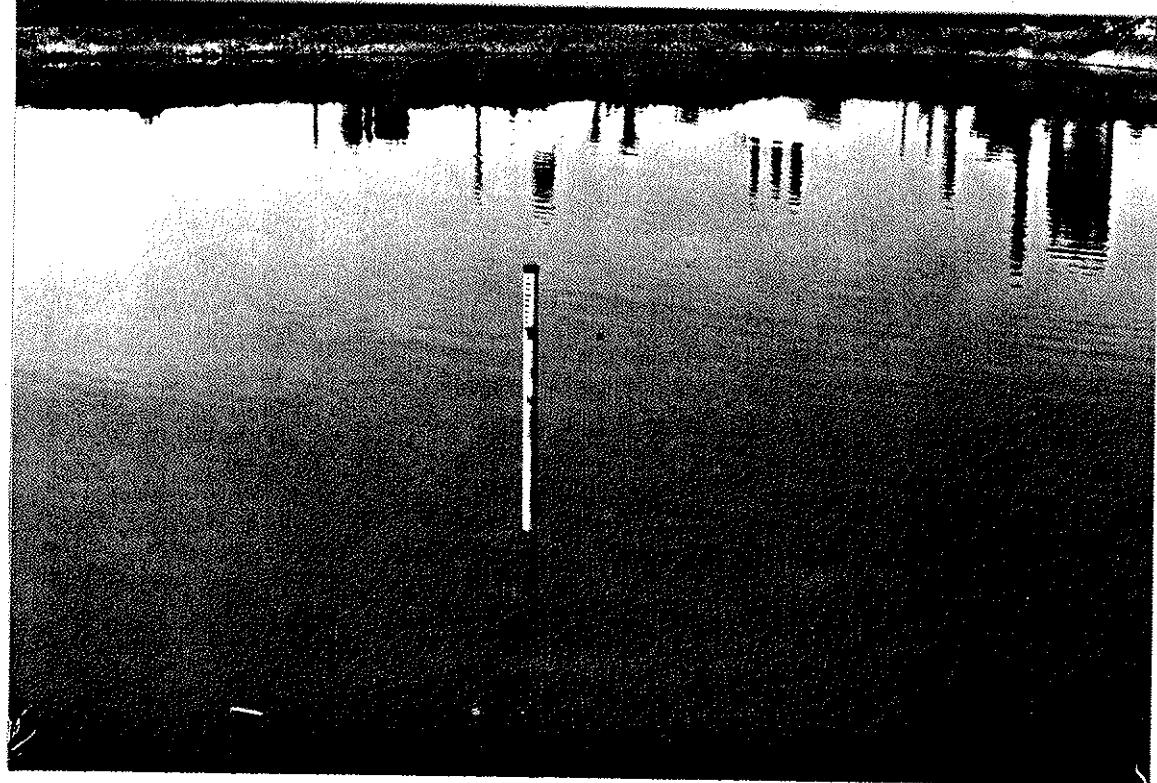
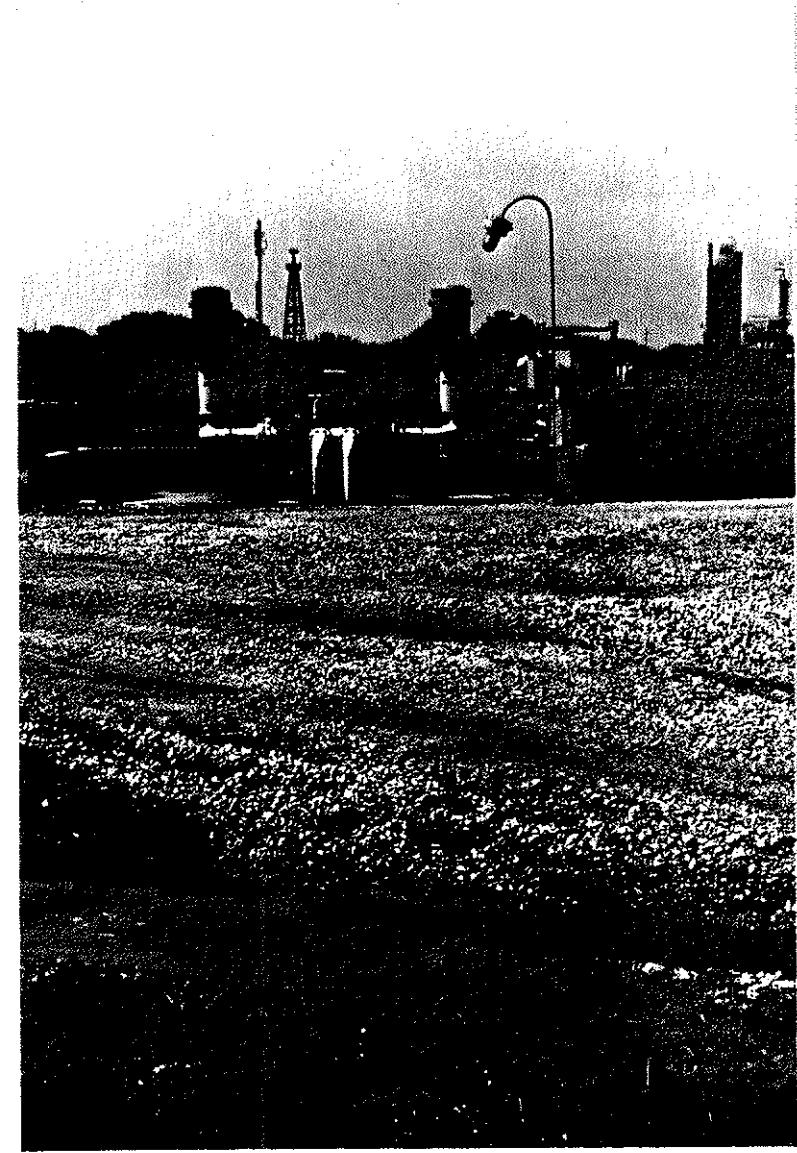
Date / Time / Direction

5/22/85 1200 Northwest

Comments:

Photo of Sample

Location 09.



Photographer / Witness

Les Cole Bill Park

Date / Time / Direction

5/22/85 1110 South

Comments:

Photo of sample
location 05.



Photographer / Witness

LPS Cole / Bill Park

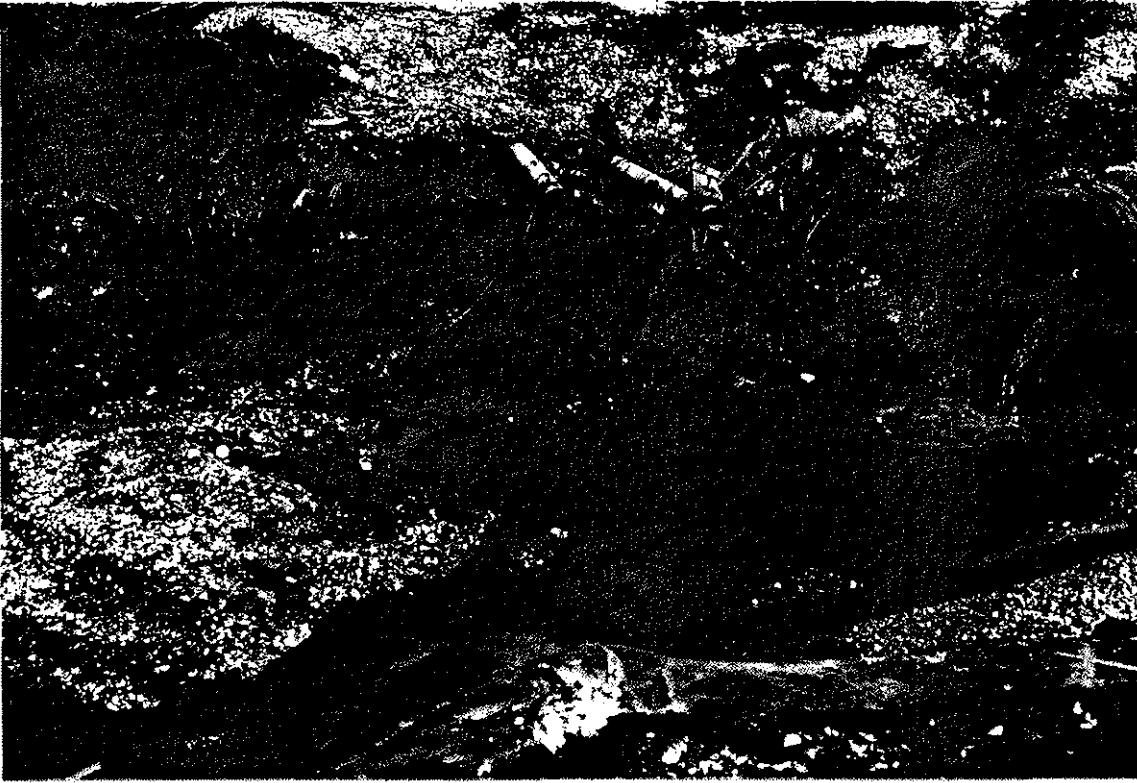
Date / Time / Direction

5/22/85 0950 East

Comments:

Photo of Sample

location 03.



Photographer / Witness

Les Cole / Bill Park

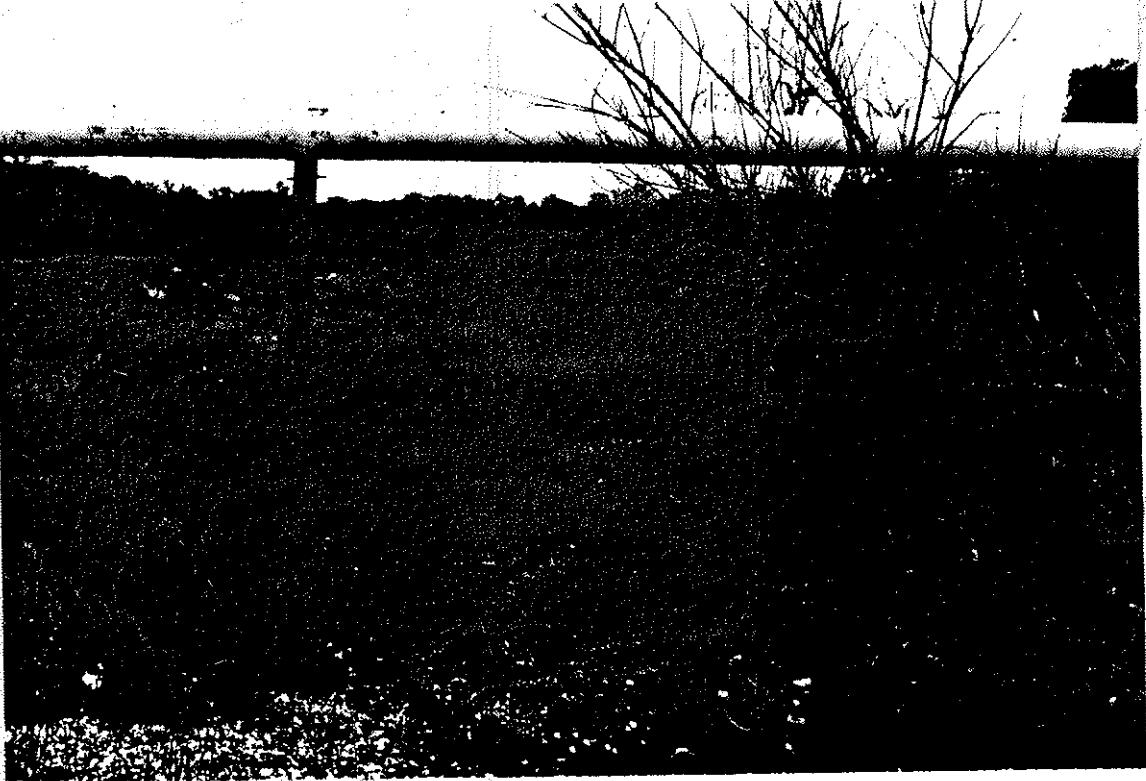
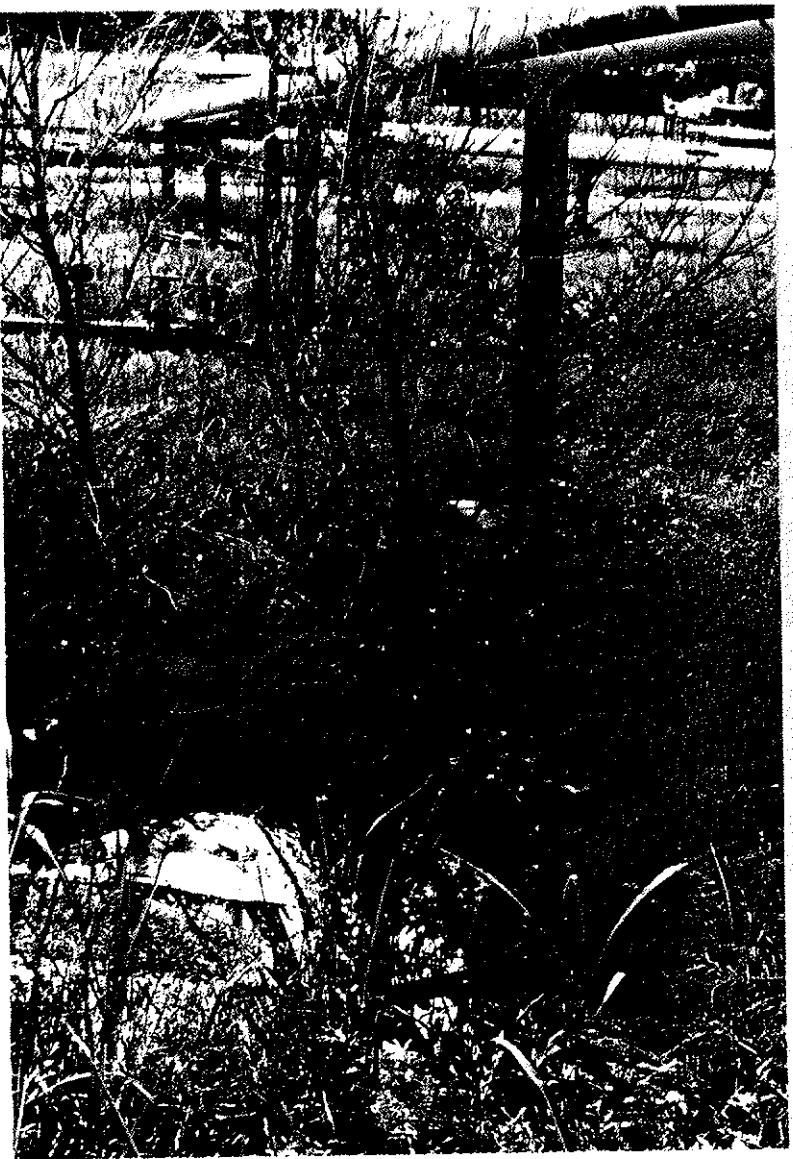
Date / Time / Direction

05/22/85 0905 West

Comments:

Photo of sample

location 02.



Photographer / Witness

Les Cole / Bill Park

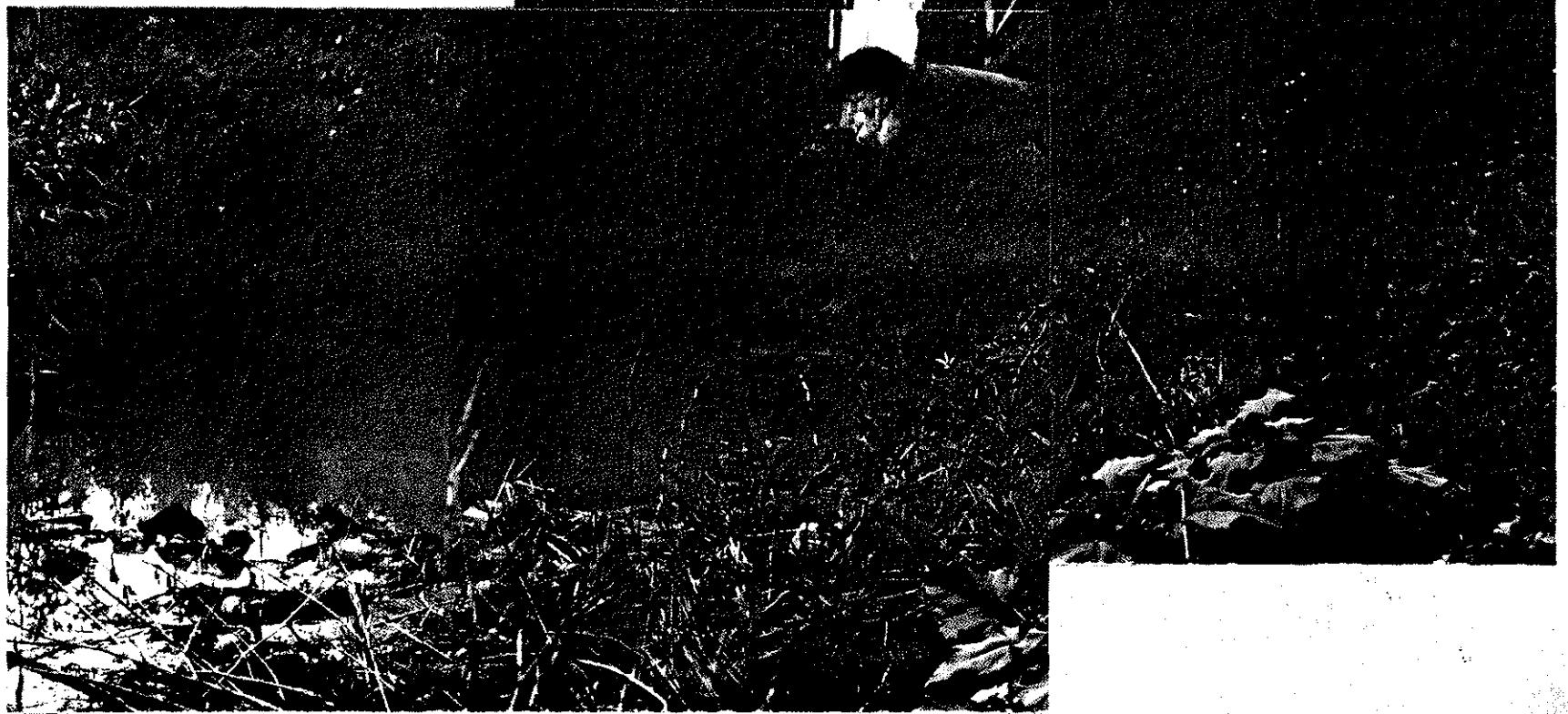
Date / Time / Direction

Shakes 0940 East

Comments:

Photo of sample

location 04.



Photographer / Witness

Les Cole / Bill Park

Date / Time / Direction

5/22/85 0950 East

Comments:

Photo of sample

Location 073



25

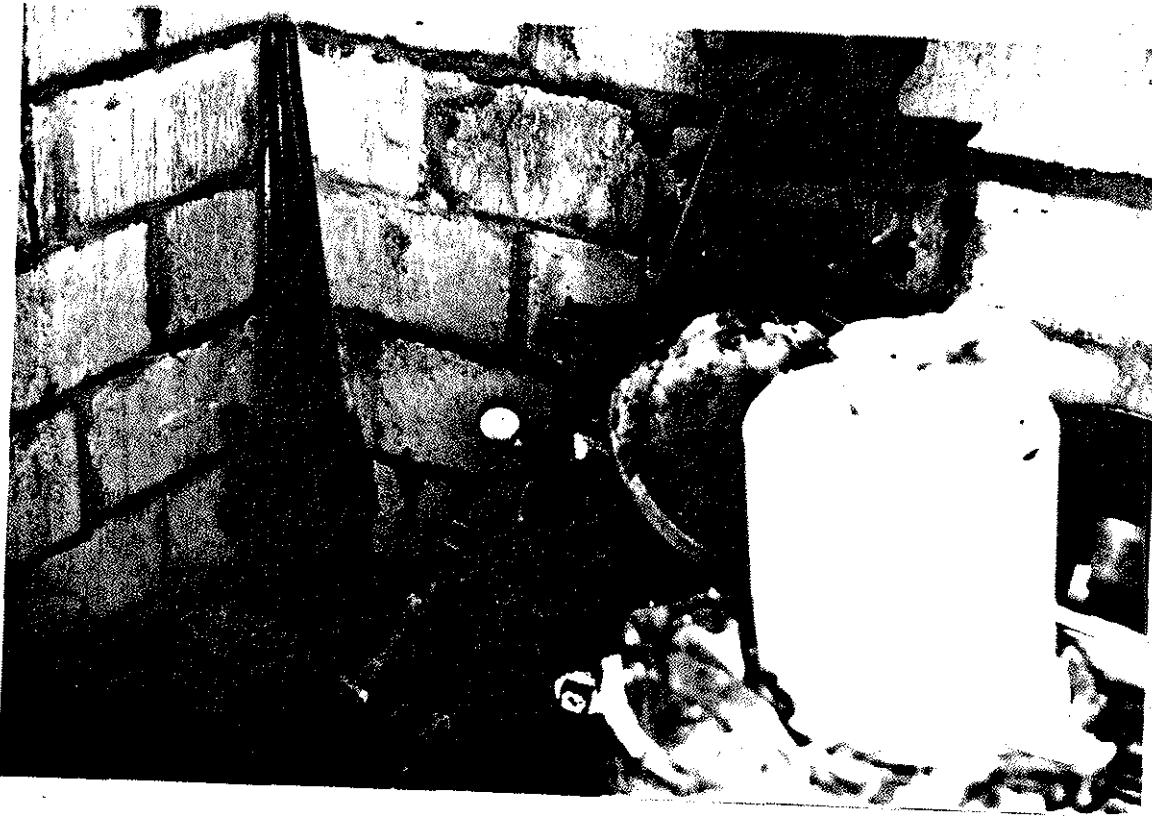
Photographer / Witness
Robin Snyder / Les Cole

Date / Time / Direction
5/22/85 1350 East

Comments:

Photo of sample

Location: _____



Photographer / Witness

Robin Snyder / LPS Color

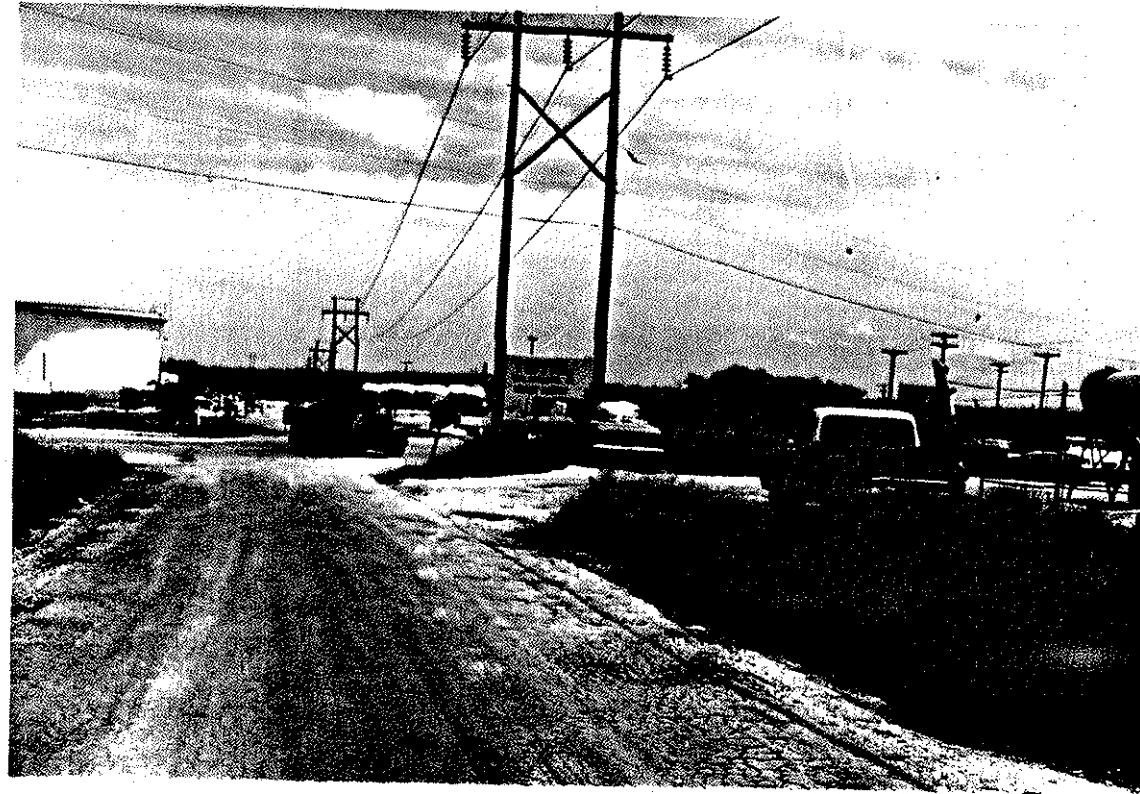
Date / Time / Direction

5/20/85 1340 North

Comments:

Photo of Epperson Well,

Station 11



Photographer / Witness

Robin Snyder / Les Cole

Date / Time / Direction

5/22/85 1347 West

Comments:

Photo of Entrance
to Total Petroleum.



Photographer / Witness

LPS Cole / Bill Park

Date / Time / Direction

3/22/85 1055 South

Comments:

Photo of Sample

location 06.